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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,463	01/30/2006	Fumio Kurotori	5417-0132PUS1	3853

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BIRCH STEWART KOLASCH & BIRCH  
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FALLS CHURCH, VA 22040-0747

EXAMINER
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NGUYEN, TUNG X

ART UNIT	PAPER NUMBER
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2829

NOTIFICATION DATE	DELIVERY MODE
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12/26/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,463	<b>Applicant(s)</b> KUROTORI ET AL.	
	<b>Examiner</b> TUNG X. NGUYEN	<b>Art Unit</b> 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 9, 18 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-17 and 19-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/30/06; 12/27/07; 2/20/08; 11/24/08</u> | 6) <input type="checkbox"/> Other: _____  |



## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of species I including the claims 1-8, 10-17, 19-26 in the reply filed on 10/06/08 is acknowledged.
2. Claims 9, 18, 27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/26/08.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-8, 10, 13-17, 19, 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Majumdar et al. (u.s.p 5,581,083 heretofore Majumdar).

As to claims 1, 10, 19 Majumdar discloses in Figs. 1-3, probe card (col. 4, lines 50-55) having plurality of a contact pin (14) for contacting a terminal of an electronic device (20) to supply the electronic device with a signal (as shown in Fig. 1), comprising: a first conductive layer (16) composed of a first conductive material with a high hardness (Ti, col. 5, lines 42-45) and a second conductive layer (18) composed of a second conductive material (Gold Au). It have been obvious to a person having an ordinary skill in the art at the time the invention was made to recognizes that the Titanium material is harder than the Gold material. Therefore, Majumdar discloses the

second conductive material layer (Au) composed of a second conductive material with a lower hardness than the first conductive material (Ti).

As to claims 4, 13, 22, Majumdar discloses in Figs. 1-3, wherein both the first and second conductive layer (16, 18 at the end of the tip 14) are exposed at the front end of the contact pin at the wafer side (DUT).

As to claims 5-6, 14-15, 23-24, Majumdar discloses in Figs. 1-3, wherein the first conductive layer is formed at the outside from the second conductive layer (the first conductive layer is formed above the second conductive layer).

As to claims 7, 16, 25 Majumdar discloses in Figs. 1-3, wherein the contact pin (14) is formed finely tapered at its front end (as shown in Fig. 3).

As to claims 8, 17, 26, Majumdar discloses in Figs. 1-3, wherein the pin is further provided with a base material (12) at the outside of which the first and second conductive layers are formed (16, 17), and the base material (12) being arranged inside the contact pin with the front end of that base material separated by a predetermined distance from the front end of the contact pin (as shown in Fig. 1).

5. Claims 2-3, 11-12, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Majumdar et al. (u.s.p 5,581,083 heretoafter Majumdar), in view of Higgins et al (u.s.p 5,923,178 heretoafter Higgins).

As to claims 2, 11, 20, Majumdar discloses in Figs. 1-3, all of the limitations except for wherein the first conductive material layer has hardness higher than the oxide film formed on the terminal of the electronic device (DUT). However, Higgins discloses in Figs. 1-6, the conductive material (14) has a hardness than the oxide film (62) formed

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on the terminal of the electronic device (20) for scrubbing the oxide film on the DUT in order to transmitting and/or receiving the signals to/from the tester during test (col. 3, lines 45-60). Therefore, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made to modify the system of Majumda, and provides the harder material on the tip of the probe, as taught by Higgins, for scrubbing the oxide film on the DUT in order to transmitting and/or receiving the signals to/from the tester during test (col. 3, lines 45-60).

As to claims 3, 12, 21, Majumdar discloses in Figs. 1-3, the second conductive material layer (gold Au) has a lower hardness than the oxide film (aluminum oxide) formed on the terminal of the electronic device (DUT).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG X. NGUYEN whose telephone number is (571)272-1967. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha T. Nguyen can be reached on (571) 272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. X. N./  
Examiner, Art Unit 2829

/Ha T. Nguyen/  
Supervisory Patent Examiner, Art Unit 2829